DOCUMENT RESUME

ED 181 743 FL 010 974

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TITLE Systems of Verb Classification and Cohesion of Verb-Complement Relations as Structural Conditions on Interference in a Child's L2 Development. Working Papers on Bilingualism, No. 18.
INSTITUTION Ontario Inst. for Studies in Education, Toronto. Bilingual Education Project.
SPONS AGENCY Department of the Secretary of State, Ottawa (Ontario).
PUB DATE Jun 79
NOTE 38p.
AVAILABLE FROM Bilingual Education Project, The Ontario Institute for Studies in Education, 252 Bloor St. West, Toronto, Ontario, Canada M5S 1V6

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Bilingualism; Child Language; Diachronic Linguistics; *English (Second Language); Error Analysis (Language); *German; Grammar; *Interference (Language Learning); *Language Patterns; *Second Language Learning; Sentences; *Sentence Structure; Structural Analysis; Verbs

ABSTRACT

Developmental data from the acquisition of English by a German child, aged 5, are analyzed with a view to identifying structural conditions that give rise to interference, and to determine which L2 structures are affected and which structures govern developmental changes. Word order in German and English sentences ahve reflexes in different degrees of cohesion between subject-verb and verb-complement relations in the two languages. The differences in cohesion interact with the systems of verb classification and constrain the kinds of revisions the subject can make in interrogation and negation. It is suggested that both the subject's development and changes in Early Modern English bear out Lehmann's hypothesis on the tendency of consistent verb-object and object-verb languages to place verbal modifiers in such a way as not to disrupt the unity of verb and cbject The subject's development and the significance of the parallels to the evolution cf English are discussed in the light of current child L2 acquisition theory which overestimates the role of creativity vis-a-vis the structural constraints exercised by linguistic systems. (Author/AMH)

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Systems of Verb Classification and Cohesion of Verb-Complement Relations as Structural Conditions on Interference in a Child's L_2 Development

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Introduction

This paper traces major developmental stages in the acquisition of English syntactic structures by a five-year-old German-speaking girl who acquired English naturalistically. The data are analyzed and discussed in relation to two issues in child L_2 research. The first of these concerns not so much the question of whether or not interference occurs in child L_2 acquisition, but rather what structural factors can account for its genesis, what particular structures of the L_2 are affected, and what are the pre-requisites for development toward interference - free structures. The second issue, and this is the broader theoretical context in which the subject's L_2 development is viewed, concerns the status we assign to the learner in the acquisition process. The literature of the past decade is replete with terms such as 'creativity', 'acquisition strategy', 'active mental organization', all of which highlight the role of the learner as an active, rule-creating agent. While researchers subscribe to the principle that the structure of the target language exercises constraints on what is acquired and in which sequence, all

FL010 974

Working Papers on Bilingualism, No. 18

too often the emphasis on the learner as an active organizer of language data has led to a neglect of the structural constraints that linguistic systems impose on the kinds and the extent of innovation possible in the transition from one system of rules to the next. Interference is a case in point. I would suggest that its undervaluation in recent years may well be due to the image it presents of the learner, an image that is not so compatible with the creative, strategy-guided view of the acquisition process. The interaction of two language systems in the acquisition process brings home more forcefully the structural constraints on the generalizations a learner can make, and the pre-conditions that have to be met for structural revisions.

Of the current frameworks in which interference is discussed, namely the 'Ignorance Hypothesis' of Newmark and Reibel (1968), and the 'Interference vs. $L_1 = L_2$' opposition established by Dulay and Burt (1974), the hypothesis advanced by Wode (1976; 1977) is the most promising. It states that the position of L_1 and L_2 on a structural similarity scale is crucial in whether interference will mark productive L_2 structures, and that the nature of the input structures a learner is exposed to will play a role in determining at what stage a learner will organize L_2 data along the lines of his L_1. This hypothesis is compatible

with a mental theory of L_2 acquisition and it is consistent with the available child L_2 data with one exception. According to Wode, his subjects went through a stage of post-main verb negative placement because they were guided by the similarity in negative placement in copular and modal constructions of English and German. This similarity prompts a structural classification that subsumes main verbs. The exceptions that come to mind are Ravem's (1968; 1974) two children who, despite the fact that Norwegian has post-main verb negation, did not go through a productive stage of post-verbal negation.

Wode, to my knowledge, has not dealt with the details of the transition from pre-verbal NC (in his Stages II.2 and III.2a) to post-verbal NOT (Stage III.2b and 2d), and the transition from thence to pre-verbal DON'T (Stage IV.b). Table I reproduces these developmental sequences.

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insert Table I about here

My subject's transitions in her system of negation along with accompanying developments with respect to subject-main verb inversion in interrogatives and word order in auxiliary/cate-

TABLE I. Developmental Sequences in Negation from Wode (197

II.2:	NEGATIVE	X
		no finish
		no cold
		no play baseball
III.2a:	SUBJECT NEGATIVE	VERB
		I'm not go Bett
		me no close the window
III.2b:		I'm steal not the base
		Marilyn like no sleepy
III.2d:		Shut not your mouth
		Hit it not over the fence
IV.b:		I don't can eat any more
		You didn't can that
		I didn't have a snack

native verb-infinitive - complement constructions lead me to conclude that the degree of cohesion existing between the subject-verb and the verb-complement relationship plays a major role in determining negative placement and distributional regularities in the transition from one structural type to the next. Cohesion between syntactic units is defined linguistically and refers to the freedom for various kinds of adverbials to intervene between subject, verb, and verb complement.

The evolution of English (particularly in the period between 1600 and 1750) from a system where subject-main verb inversion and post-main verb negation coexisted with periphrastic DO to a system with obligatory use of periphrastic DO provides further support for the postulated constraints exercised by cohesion in the subject's L_2 development. In both cases, the shift to periphrastic DO follows distributional regularities which derive from the degree of cohesive unity between verb and complement. This parallel, in fact, raises the question whether the two diachronic processes are subject to a more general principle. I will propose that the constraints governing the sequence of innovations in interrogation and negation can be related to Lehmann's (1973; 1976) hypothesis that consistent VO and OV languages seek to maintain an adjacency unity of verb and object and will tend to position verbal and nominal modi-

fiers in such a way as not to disrupt this unity.

Subject and Data Collection

The subject of this study, Dorothee, came into contact with English at age 4:2, at which time her parents moved to England. Up until that time she had spoken only German. Subsequent to her arrival in England her father, an American, communicated with her in English while her mother continued to use German. Her father remained her primary model of English until she entered a local school in September 1976, contact with peers not being very intensive nor extensive during her first year of residence. One can safely say that due to longer absences from home by her father for work-related reasons, Dorothee's acquisition environment during the first year did not constitute a submersion experience comparable to that of other child L_2 learners whose daily amount of contact with the L_2 ranges anywhere from three to eight hours. To what extent this gradual, spaced-out exposure to English may represent a non-linguistic influence contributing indirectly to the structural factors that gave rise to transfer must remain an open question.

The data presented in this paper are taken from samplings in February (after five months of exposure), May, June, July, October and November 1976. Samplings were taken over a two

or three-day period in each of these months amounting to approximately one-and-one half to two hours of speech per session. All recordings are candid. The situational range involves play scenes and meal scenes mainly. While much of the data is based on the subject's verbal interaction with her father and her two-year-old brother, the sessions for February and June include interaction with the investigator, and the session for July interaction with neighbourhood children. The data in the Appendix for negation, interrogation and word order in auxiliary/catenative verb constructions are listed exhaustively only where consideration of space permit; elsewhere utterances were selected with an eye to providing the reader with examples illustrative of the structural types that occurred in each sampling, particularly with respect to verb types. Examples used in the text are also contained in the Appendix and follow the lettering and numbering employed there for easier reference.

A limitation in the data collection is the large five-month gap preceding the first recording session, the gap between February and May, and again between July and October. These limitations in the data base are mitigated in two ways. Throughout the observation period the subject's father, a professor of English, cooperated closely with the investigator, keeping him informed on her English speech development. Second, the data does not

appear to contain any major developmental discontinuities. Transitions from one structural type to the next are gradual and follow in a principled way from the structural development she had evidenced in the preceding session.

Early Evidence for Structural Cohesion: The Co-existence of Pre-verbal and Post-verbal Negative Placement

In the February sample there is a total of fifteen negative utterances involving a verbal element (Ns 1-15). The negative marker NOTHING occurs post-verbally while NOT occurs both before and after the verbal element. Table II provides descriptions for the three construction types.

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insert Table II about here

There are two chief things to notice. First, all verb types represented (negative equational constructions have copular verb missing and are therefore not considered) are capable of taking NOT (V-ing verbs take NOT and NOTHING) post-verbally. Verbs having -ing inflection (V-ing), modals and base verbs show this distribution.

TABLE II. Negation in February based on 15 recorded utterances with verbal elements (cf. Appendix Ns 1-15)

NEG. - S_1	NOT- { VERB }
NEG. - S_2	(SUBJECT)- { VERB } - NOT/NOTHING
	VERB: { MODAL, BASE VERB, V-ing }
	Lexical rule: NOTHING → /V-ing___#
	e.g. not fit (N.1) not cans (N.2) not shopping (N.6) I'm sleeping not (N.5) Sleeping nothing (N.3) Er eat not (N.9)
NEG. - S_3	I don' know (N.14)

N.1 not fit

N.2 not cans

N.3 not shopping

N.4 My Teddy can not sleeping

N.5 I sleeping nothing

N.6 Er (he) eat not

After February - with one lone exception in November (N.64) - there are no more recorded examples of post-verbal negation with a V-ing verb. For this stage, then, interference does not seem to be selective and systematic with respect to verb types.

The second thing to notice is that there is an obvious distributional restriction on the occurrence of pre-verbal negation: it occurs only in subjectless utterances, whereas all utterances containing a subject have post-verbal negation. Looking at adult German, we find that pre-verbal negation is limited to dependent clauses and, significantly, subjectless sentences of the impersonal imperative type.

1. Nicht rauchen 'No smoking'

Once a subject is present, or the imperative is directed at a particular individual, the negative marker follows the verb.

2. Du rauchst nicht! 'Don't smoke'

More generally, it can be said that in main clauses cohesion

between subject and verb allows no intervening adverbial constituents.

3.*Er noch bewundert Trudeau 'He still admires Trudeau'

Given this cohesive unity of subject and verb in German, the difference in the positioning of the negative marker depending on the presence of a subject would make the Cohesion Hypothesis plausible. Subsequent developments provide further support.[1]

The Interaction of Verb Classification and Structural Cohesion

In May (after eight months of contact) we begin to see the operation of the structural similarity metric. Attempts to explain away interference by invoking the Ignorance Hypothesis would run into genuine difficulties from this point on. Although modals, copulas, base verbs and auxiliaries undergo subject-verb inversion in Yes/No questions (Is 8, 19, 9, 16), V - ing verbs are effectively excluded from inversion, even though this verb type occurs in declarative affirmative utterances. In fact, V - ing does not appear in Yes/No questions until subject - base verb inversion is given up in favour of intonation questions in July (I.25). Similarly, all verb types except V - ing are capable of taking post-verbal negation. Now if interference were a matter of ignorance, why should the inversion and negative placement operations which apply across four out of five possible verb types not generalize to the remaining verb type? The operations

only apply to verb types that have formal equivalents in German. We are left with the conclusion that the similarity metric controlling transfer rests not only on the syntactic behaviour of verb types but also on their formal shape.

It has been pointed out by Ravem with respect to Norwegian, and Wode with respect to German, that these languages have a simpler system of negation than English in that the negative particles IKKE and NICHT follow the first verbal element, regardless of whether this is an auxiliary, copula or base verb. In a description of English relying on surface structure, English would differ only in the behaviour of base verbs. The inclusion of base verbs in a class with auxiliary and copular verbs by the subject of this study represents a mental classification based on syntactic similarities in the behaviour of verb types in English and German. This explains why Wode's subjects and my subject go through a productive stage of post-verbal negation, Huang's (1971), Milon's (1974), and Cancino et al's (1975) subject do not go through such a stage, their L_1's being respectively Chinese, Japanese, and Spanish. The problem that remains to be accounted for in testing the degree of fit between Wode's Structural Similarity Hypothesis and extant child L_2 data are Ravem's two subjects, who did not go through a productive stage of post-verbal negation.

Norwegian is unlike German and structurally closer to English in one crucial aspect. In auxiliary constructions Norwegian has the same word order as English: SUBJECT - AUX - MAIN VERB - (OBJECT), whereas German in such constructions has OV word oder. Norwegian, like English, therefore has a more consistent VO order than German. I suggest that the OV order of German in auxiliary constructions and dependent clauses, and the consistent VO order of English have reflexes at the level of surface structure in the degrees of cohesion between verb and complement. Recent work by Lehmann on language typology makes a strong case for the position that the verb-object relationship is the primary one in sentence structure. According to Lehmann (1976: 447 - 448), consistent VO and OV languages will seek to maintain an adjacency unity of verb and object, placing modifiers in such a way as not to disrupt this unity. Although both English and German have SVO order in main clauses with finite verbs only, the position of verbal modifiers in English respects VO unity, whereas the position of verbal modifiers in German disrupts this unity in many cases. For example, both languages allow no adverbial constituents between verb and pronoun object:

4* Ich trage nie es.

* I carry never it.

German allows more leeway than English in the adverbial constituents that can occur between verb and noun object:

5. Ich trage nie/immer das Buch or Ich trage das Buch nie/* immer

* I carry never/always the book.

Similarly, the cohesion between verb and preposition phrase is tighter in English than in German:

6. Ich sitze nie/immer in der ersten Reihe

* I sit never/always in the first row.

One can see that for German these three kinds of complements can be ranged according to the degree of cohesion to the verb they exhibit: pronoun objects display the strongest degree of unity, then noun objects, and preposition phrases display the weakest.

These differing degrees of cohesion in German between verb and complement are disrupted categorically in dependent clauses and auxiliary constructions where object and adverbial complements precede the main verb. Since Norwegian retains VO order in auxiliary constructions, one can hypothesize that the more consistent VO order of Norwegian favoured a developmental course in Ravem's subjects where the preservation of VO unity in English was a structurally more decisive factor than the similarities in negative placement between English and Norwegian. That these two structural factors - the system of verb classification and verb-complement cohesion - do in fact exert opposing pressures will become clear as we proceed. As I will show in the following section, for my subject the loss of post-main verb

inversion and the abandonment of subject-verb inversion with main verbs in interrogation is a concomitant development of acquiring the consistent VO structure of English. This is a gradual process in which the degrees of cohesion between verb and complement types interact with the subject's verb classifications.

The rule that negation operates in such a way that the negative marker is positioned after the first verbal in a main clause applies to the following verb types from May until July:

COPULA MODAL BASE VERB AUXILIARY BE/HAVE WANT	not (X)

For example:

N.21 Aber (but) my mother say... he is not ... he ...

N.19 You can not picture make

N.32 He likes not the squash

N.28 You are not spank

N.22 I have not drink

N.23 I wants not to the swim drive

That negative patterns with modal verbs in English and German may be the pivotal type in the subject's verb classification

for negative placement is suggested by the isolated occurrence of I hurt not myself (N.30) which violates the cohesion of verb-reflexive pronoun in German. The categorical rule she appears to be following, namely, placing the negative immediately after the verb, is in conflict with the verb-reflexive pronoun cohesion in both languages.

Evidence for the reality of the constraints exercised by cohesion can be seen in the total absence of utterances that would conform to German word order SUBJECT - MODAL/WANT (TO) - PRO. OBJ - INFINITIVE. What we find instead in May are constructions with pronoun object omission.

AW.1 I want make

AW.6 You can't have

In June, when pronoun objects are realized in affirmative and negative modal construction, they adhere with one exception (AW.16) to English word order.

AW.12 I can't say you

AW.20 Can you do that?

Noun objects in declarative affirmative constructions conform to English word order.

AW.3 He can make a tree

While declarative affirmative clauses are clearly progressive in attaining English word order, noun objects and preposition

phrases in non-declarative affirmative clauses show the influence of German word order. This extends to preposition phrases in declarative affirmative clauses as well.

AW.2 The dog cannot raindrops make

AW.7 I wants not to the swim drive

AW.13 Wo I can my tractor park?

AW.22 He want yet (now) with me sleep

The sequence in which the verb-complement order of English becomes established in these constructions adheres very closely to the degrees of cohesion outlined earlier for German. With the one exception mentioned above, pronoun and noun objects conform to the VO order of English first. Preposition phrases are the last to conform. These developments in word order up to July prepare the ground for changes in interrogation and negation. The fact that by July we no longer find examples of noun objects or preposition phrases preceding the governing verb strongly suggests that the acquisition of VO word order unity is a structural pre-requisite for upcoming changes in interrogation and negation.

In July, subject-verb inversion in Yes/No questions with base verbs is abandoned in favour of intonation questions.[2] With the establishment of intonation questions, verbs with progressive inflection appear in Yes/No questions.

I.26 You like me?

I.25 He klemming (pinch) his leg?

I suggest that the development toward the consistent VO order that we observed in the preceding period provides the necessary precondition for this innovation. Note that while she used subject - verb inversion, as in, for example, Drink horse milk? (I.11), the unity of verb and complement was disrupted.

In line with this development in interrogation, the July sample contains the first recorded example of DON'T in a declarative clause. (It occurs earlier in imperatives.) DON'T occurs in a clause containing a noun object.

N.42 I don't like the X.

Here, too, while post-main verb negation was used, the unity of verb-complement was disrupted. Corroborative evidence for the role ascribed to verb-complement cohesion in bringing about these changes derives from sentences that continue to exhibit post-main verb negation. These sentences lack object complements and have structures of the type VERB___{ # / ADVERB } or WANT ____ INFINITIVE.

N.40 Down I go not

N.41 He drives not there

N.38 I want not drive

Both the presence of post-main verb negation in structures of

the above types and the occurrence of DON'T in a verb-object context follow from the postulated cohesive unity of V-O that the subject attained in a stepwise fashion during the preceding period.

The motivation for establishing a separate verb type WANT for the entire period should now be apparent. The verb WANT in its catenative function retains subject-verb inversion in July (I.23), and will retain post-verbal negation until October. Syntactically, then, the subject continues to classify WANT as a modal verb. Upon closer examination this is not surprising. Superficially WANT patterns like a modal, and with both types, verb (i.e. infinitive) - complement unity is preserved even when the subject inverts in interrogation and the negative particle is positioned after the first verbal element. In moving to preverbal DON'T Dorothee has found another formula for keeping her system of negation simple. With the exception of copulas, all verb types can now follow the formula X - PRE-VERB - NEGATIVE - MAIN VERB. I propose that for July interrogation and negation display the verb classification and verb-complement constraints set out in Tables III and IV respectively.

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insert TABLE III about here

TABLE III. Interrogation in July based on 24 utterances (cf IS 21-30)

Yes/No questions

VERB - SUBJECT - (X)

VERB: {MODAL, COPULA, WANT}

e.g. Are you my little baby? (I.27)
Want you sit up there? (I.23)
Shall I drive to him? (I.30)

Yes/No and Wh questions

(WH) - SUBJECT - VERB - (X)

VERB: {BASE VERB, V-ing}

e.g. What you doing? (I.21)
He klemming his leg? (I.25)
you like me? (I.26)

TABLE IV. Negation in July based on 11 negative utterances (cf Appendix NS 35-42)

I. SUBJECT - VERB - NOT - (X)

Condition: X ≠ DIRECT OBJECT

VERB: {COPULA, WANT, BASE VERB, MODAL, AUXILIARY*}

e.g. I can't drive (N.35)
I want not drive (N.38)
Down I go not (N.40)
He drives not there (N.41)

II. SUBJECT - DON'T - BASE VERB - OBJECT

e.g. I don't like the X (N.42)

* not attested but presumably permitted (cf. Ns 28, 33)

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insert TABLE IV about here

The Vestiges of Post-Verbal Negation and Negation in Early Modern English

Although WANT is a hold-out with respect to loss of subject-verb inversion in July, by October all instances of inversion comply with norms of adult English. However, despite the ap-

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insert TABLE V about here

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parent productiveness of DON'T in October, the data for that month and November contain a few occurrences of post-verbal negation. These are, exhaustively:

N.45 I want not

N.46 No, Peter want not

N.51 I hope not

N.52 I think not

N.56 We wash that not

N.58 I mean not

N.64 Why we talking not?

The structural unity of verb-complement that was postulated as a condition for the transition to pre-verbal DON'T and intonation questions is brought into sharp focus by these final reflexes of the once powerful negative placement rule. Six of the seven recorded utterances have no verb complement and the

TABLE V. Interrogation in October based on 26 utterances (cf. Appendix Is 31-40)

Yes/No and Wh questions

I. (WH) - SUBJECT - VERB - (X)

VERB: {BASE VERB, V-ing,* WANT}

e.g. Why he needs that? (I.39)
You like honey? (I.38)
You want to have medicine? (I.34)
What's you want? (I.37)

II. (WH) - VERB - SUBJECT - (X)

VERB: {COPULA, AUXILIARY, MODAL*}

e.g. Where is my car? (I.32)
Did Peter come? (I.35)
Is it all gone? (I.31)
Was Peter sleeping good? (I.40)

---

* Not attested, but certainly productive on basis of their occurrence in July and November.

one exception respects verb-object unity. Thus we see that English sentence structure provides the final loopholes for post-verbal negation.

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insert TABLE VI about here

Examples N.51 and N.52 represent, of course, acceptable instances of post-verbal negation in Modern English. In both examples, and the one with the intended meaning of mean (N.58), NOT is elliptical, stemming from a negated dependent clause.

7. Is John coming?

- I hope /think/ believe {he is not coming}

One could argue that the examples with think and hope have been picked up from speech models and extended to the other verbs represented in the examples. A far more plausible explanation would be that these examples terminate a development that began in July with the restriction of post-verbal negation to constructions without a direct object. This distributional restriction raises the rather intriguing question whether the structures exhibiting a conservative behaviour in acquiring DON'T are in some way prefigured in the evolution of English toward negation with periphrastic DO. As in the subject's development, both types of negation coexisted in English well into the 18th century.

In Early Modern English periphrastic DO coexisted with subject-

TABLE VI. Negation in October based on 21 negative utterance (cf. Appendix Ns 43-55)

I. SUBJECT - PREVERB - NOT - (MAIN VERB) - (X)

Condition: X may not be null when MAIN VERB ≠ WANT

e.g. *I don't want

PREVERB: {AUXILIARY, MODAL}

e.g. I don't like peanut butter (N.48)
He says no, he don't want to do it (N.54)
Didi's sister don't make (N.55)
I don't think so that he will do it (N.53)
You are not swing, you two (N.47)
You must no cheat (N.43)

II. SUBJECT - VERB - NOT #

Condition: Scope of negator applies to understood phrase or clause*

VERB: {BASE VERB, WANT}

e.g. No, Peter want not (N.49)
I hope not (N.51)
I think not (N.52)

III. SUBJECT - COPULA - NOT - (X)**

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* Two exceptions to this occur in November (Ns 56,64)

** Not attested but certainly productive.

main verb inversion in interrogation and post-main verb negation. Scholars (e.g., Closs-Traugott 1972:185f; Ellegard 1953: 162) seem to be in agreement that interrogative structures acquired DO in advance of negative structures. According to Ellegard, by 1600 DO periphrasis was statistically more frequent in a V~NP context, that is to say, in a verb-object environment. This very same structural constraint can also be traced in the shift from post-main verb NOT to negation with DO.[3]

In the prose of Thomas Nashe (born 1570) the older device of negation in structures with direct objects is not uncommon:

a. ... they took not up their crosses of humility...

b. ... if he assured not by some sign their prayers.

c. Beholding ... that I clipped not the honour of his wings...

d. ... insomuch as the female ... hatcheth not her eggs by covering them ...

Similarly, in Dryden's prose one can find:

e. That I admire not any comedy equally with tragedy....

f. ... of pleasing them, who understand not Nature.

In Fielding's prose (born 1707), post-verbal NOT has become somewhat formulaic in that it occurs preferentially with such verbs as know, care, doubt, question, think, and then mainly in the present tense. More important, however, than this re-

striction is the nature of the verb-complement relationship. Post-main verb negation is almost invariably limited to negative final clauses and complements that involve sentence embedding. The relaxed degree of cohesion between verb and complement usually tends to be marked by overt complementizers such as <u>that</u>, <u>but</u>, and <u>if</u>.

$$X - VERB - NOT \left\{ \begin{array}{l} \left\{ \begin{array}{l} THAT \\ BUT \\ IF \end{array} \right\} \quad SENTENCE \\ \\ WH \quad - \quad INFINITIVE\ PHRASE \\ \# \end{array} \right\}$$

I suggest that these structural developments in Early Modern English have structural correspondences in the subject's L_2 development. As in the evolution of English, loss of subject - main verb inversion precedes the displacement of post-main verb NOT. Both types of negation coexist under strikingly similar distributional restrictions. Differences in verb-complement structure cohesion depending on the complement type provide the relevant structural constraint on the generalization of negatives with periphrastic DO.

I propose that the structural correspondences can be related

to the more general principle of the centrality of the verb and object relationship as outlined in Lehmann's framework. Both the subject of this study and Early Modern English show development towards a more consistent V-O word order structure. In Early Modern English and in the subject's English speech between February and July subject-main verb inversion and post-main verb negation disrupt the unity of the verb-object relationship. In interrogation, this unity is disrupted by a major sentence category: the subject (e.g. VSO). Not surprisingly, in both diachronic processes interrogation is the first to attain V-O unity. Subsequently, the minor sentence category, the negative adverb NOT, is repositioned. In this restructuring process verb-object structures, which exhibit the closest degree of structural cohesion between verb and complement, are progressive in acquiring pre-verbal negation.

Conclusion

I think it significant that, in trying to account for developmental phenomena of this subject's acquisition of English, I have found it necessary to refer the reader to structural features of the two languages, diachronic processes in English language history, and language typological features. I think that more than in the past we have to direct our efforts toward discovering how linguistic systems constrain the rule changes

or innovations a learner can initiate at a particular structural level in his development. Under the influence of transformational grammar we have focussed on the learner as a creator of abstract systems of rules who formulates, tests and revises hypotheses about the structure of the language he is exposed to. Too often we seem to view the learner's hypotheses testing on a par with the linguist's. We forget that unlike the linguist, the learner, once he commits himself to a "hypothesis", is caught in a system of relationships; a system of relationships which control what he can do at any particular point. Our current perception of the learner, which I do not wish to dispute entirely, must undoubtedly be seen as a revolt against the earlier, structuralist viewpoint. There the learner was seen as a passive, negligible quantity, and native language habits and contrasting structures counted for everything. Yet the structuralist viewpoint, when freed of its behaviorist trappings, appears to have been in possession of a fundamental insight: that linguistic systems and language change have an internal logic of their own, a logic that circumscribes and prescribes what innovations and changes are possible.

Notes

1. The only unambiguous structure in Wode's developmental sequences that has pre-verbal negation with subject present is Structure III.2a: me no close the window. There are grounds, I think, for considering this to be a linear expansion of Stage II: no finish. The use of the object pronoun me as subject and the presence of the anaphoric negative marker no instead of not suggest that this is an additive instead of an integrated syntactic structure. In this case the subject-verb cohesion I postulate would be relaxed or absent.

2. Wh- questions drop inversion earlier. It will be recalled that in Ravem's study only Yes/No questions showed influence from subject-main verb inversion in Norwegian. Thus, in both cases Wh- questions show greater immunity to structural transfer.

3. The examples are taken from John Dryden "Preface to 'An Evening's Love' " in P. Lauter (ed.), Theories of Comedy. Garden City, N.Y.: Anchor Books, 1964; Thomas Nashe, The Unfortunate Traveller in R.B. McKerrow (ed.), The Works of Thomas Nashe. London: Basil Blackwell, 1966. For late 17th and early 18th century prose Congreve's The Way of the World. Defoe's Moll Flanders, and Fielding's Tom Jones were examined for the relative frequencies of both types of negation.

This is a slightly revised version of the paper presented to the section on Second Language Learning at the Fifth International Congress of Applied Linguistics, Montreal August 20-26, 1978. The author would like to express his thanks to Prof. Henning Wode for his comments on an earlier version of this paper.

References

Cancino, Herlinda, E.J. Rosansky, J. Schumann 1975. The acquisition of the English auxiliary by native Spanish speakers. TESOL Quarterly 9 (4), pp. 421 - 430.

Closs - Traugott, Elizabeth, 1972. A History of English Syntax. A Transformational Approach to the History of English Sentence Structure. New York, Holt, Rinehart & Winston.

Dulay, Heidi, M. K. Burt 1974. You can't learn without goofing. An analysis of children's second language errors. In Jack C. Richards (ed.), Error Analysis - Perspectives on Second Language Acquisition. London, Longman, pp. 95 - 123.

Ellegard, Alvar 1953. The Auxiliary DO: The Establishment and Regulation of its Use in English. Gothenburg Studies in English II, STockholm.

Givon, Talmy 1976. Topic, pronoun and grammatical agreement. In Charles N. Li (ed.), Subject and Topic. New York, Academic Press, pp. 151 - 188.

Huang, Joseph 1971. A Chinese Child's Acquisition of English Syntax. M. A. Thesis, U. C. L. A.

Lehmann, Winfred 1973. A structural principle of language and its implications. Language 49, pp. 47 - 66.

Lehmann, Winfred 1976. From topic to subject in Indo-European. In Charles N. Li (ed.), Subject and Topic. New York, Academic Press, pp. 447 - 456.

Milon, JOhn 1974. The development of negation in English as a second language. TESOL Quarterly 8 (2), pp. 137 - 143.

Newmark, Leonard, D. A. Reibel 1968. Necessity and sufficiency in language learning. International Review of Applied Linguistics 6 (2), pp. 145 - 164.

Ravem, Roar 1968. Language acquisition in a second language environment. International Review of Applied Linguistics 6 (2), pp. 175 - 185.

Ravem, Roar 1974. Second Language Acquisition - A Study of two Norwegian Children's Acquisition of English Syntax in a Naturalistic Setting. Ph. D. Dissertation, University of Essex.

Wode, Henning 1976. Developmental sequences in naturalistic L_2 Acquisition. Working Papers on Bilingualism, No. 11, pp. 1 - 31.

Wode, Henning 1977. On the systematicity of L_1 transfer in L_2 acquisition. In C. A. Henning (ed.), Proceedings of the Los Angeles Second Language Research Forum. Dept. of English, U. C. L. A., pp. 160 - 169.

Appendix

Negative Utterances

February 1976 (All negatives in construction with verbal elements and the two equational constructions are listed.)

N.1	not fit	'a toy won't fit on a toy truck'
N.2	not cans	'her brother can't move a toy crane'
N.3	sleeping nothing	'her brother was crying in bed'
N.4	sleeping not	'spoken in response to the investigator's question "He's not sleeping?"
N.5	I'm sleeping not	
N.6	not shopping	'spoken in response to the investigator's question "Are you going shopping?"
N.7	My Teddy can not sleeping	
N.8	not sleeping	
N.9	Er (he) eat not	
N.10	not sleeping	'spoken in response to the investigator's question "Do you like to sleep?"
N.11	not sleep	'spoken in response to the investigator's question "He's still eating?"
N.12	not sleeping	'spoken in response to the investigator's question "He's not sleeping?"
N.13	Er like not	'in response to the investigator's question "Doesn't he like my Pooh?"
N.14	I don' know	'in response to "What did the dog have, Dorothee?"
N.15	I sleeping nothing	
N.16	not good	'spoken in response to the investigator's
N.17	nothing good	statement "The peanut butter is good." '

Negative Utterances

May (all utterances containing a verbal element)

N.18 The dog cannot raindrops make
N.19 You can not picture make
N.20 You can't have
N.21 Aber (but) my mother say... he is not ... he... er war nicht ganze Nacht da ('he wasn't there the whole night')
N.22 I have not drink
N.23 I wants not to the swim drive

June (based on 51 negative utterances containing a verbal element)

N.24	No, Didi, you go not home	'she reports what she thinks her father told her to do'
N.25	I want not home go	
N.26	You are not a good girl	
N.27	I eat not	'I'm not eating'
N.28	You are not spank	
N.29	I can't say you	
N.30	I hurt not myself	'in response to "You're gonna hurt yourself." '
N.31	My doll wants not go in bath	
N.32	He likes not the squash	
N.33	We are not sing	'in response to "What did you sing?"
N.34	Don't cry	(first recorded spontaneous occurrence of DON'T apart from 'I don't know')

Negative Utterances

July (based on 11 negative utterances)

N.35	I can't drive
N.36	I can't read it
N.37	I cannot better park
N.38	I want not drive
N.39	Then it cannot fly away
N.40	Down I go not
N.41	He drives not there
N.42	I don't like the X

October (based on 21 negative utterances)

N.43	You must no cheat	
N.44	He don't told me what he do	
N.45	I want not	'in response to "Who wants to go next?"
N.46	They are not allowed	
N.47	You are not swing, you two.	
N.48	I don't like peanut butter	
N.49	No, Peter want not	'in response to "Peter wants more cows to come in our garden" '

N.50 He don't need that
N.51 I hope not
N.52 I think not
N.53 I don't think so that he will do it
N.54 He says no, he don't want to do it
N.55 Didi's sister (brother) don't make

Negative Utterances

November (based on 24 negative utterances)

N.56 We wash that not 'We're not going to/won't wash that'
N.57 I don't put enough in 'I'm not putting..."
N.58 I mean not 'I don't think so'
N.59 I don' think you are in a moment finished
N.60 'Cause when you smack me, I can't eat
N.61 You don't touch it any more, aren't you?
N.62 I'm not so dumb like Peter
N.63 The piano don't go 'The piano isn't working'
N.64 Why we talking not?
N.65 No, we don't want it.

Interrogative Utterances

February 1976 (exhaustive of utterances with verbal element)

I.1 Coming to me?
I.2 Wo (where) is your sugar?

May (based on 9 interrogative utterances with verbal element)

I.3 Wann (when) come you up?
I.4 Want we go down oder (or) up?
I.5 Want you? You can
I.6 What his name?
I.7 Have you lunch?
I.8 Can dog crying?
I.9 Like you tea?

Interrogative Utterances

June (based on 36 interrogative utterances)

I.10 Can Luxle have a peanut?
I.11 Drink horse milk?
I.12 What he say?
I.13 Wo I can my tractor park?
I.14 Wo can I may tractor park?
I.15 Where have you your crackers?
I.16 Have you take your card home?
I.17 Can you me swing?
I.18 What are they
I.19 Is you OK?
I.20 He spank you or not?

July (based on 24 interrogative utterances)

I.21 What you doing?
I.22 I go up there, yes?
I.23 Want you sit up there?
I.24 How old is it?
I.25 He klemming (pinch) his leg?
I.26 You like me?
I.27 Are you my little baby?
I.28 You come back rauf (up)?
I.29 Do you like my bicycle? (quasi-spontaneous: Do you like was modeled a few utterances earlier)
I.30 Shall I drive to him? (only recorded example of shall in an interrogative utterance)

Interrogative Utterances

October (based on 26 interrogative utterances)

I.31 Is it all gone?
I.32 Where is my car?
I.33 Papa come in the pub? 'Is Papa going...'
I.34 You want to have medicine?
I.35 Did Peter come? (only recorded example with DO in October)
I.36 Papa, you need that?

I.37 What's you want?
I.38 You like honey?
I.39 Why he needs that?
I.40 Was Peter sleeping good? (only recorded example with Aux. BE in October)

November (based on 33 interrogative utterances)

I.41 Why you opened the window?
I.42 You know how big it was?
I.43 Papa, you have see Hans? (cf.I.16)
I.44 And Hans, how he is?
I.45 Can you cut me one?
I.46 You want to go out?
I.47 Where is Luxle?
I.48 When you are finished? 'When will you be finished?'
I.49 Why Peter hitting me so much?
I.50 What colour this is?
I.51 You are going to her with?

Word-order in Auxiliary/WANT constructions.

Examples are selected with a view to providing a picture of the establishment of English word-order.

May 1976

AW.1 I want make 'I want to do it'
AW.2 The dog cannot raindrops make
AW.3 He can make a tree
AW.4 You can not picture make
AW.5 The dog wants have lunch
AW.6 You can't have 'You can't have it'
AW.7 I wants not to the swim drive

June

AW.8 I want not home go
AW.9 Can Luxle have a peanut?
AW.10 You can too smoke 'You can smoke too'
AW.11 You can riding of (on) me.
AW.12 I can't say you
AW.13 Wo I can my tractor park?
AW.14 Have you take your card home?

AW.15 You can not in our garden go
AW.16 Can you me swing?
AW.17 I will not hit you
AW.18 My doll want not go to the bath
AW.19 You has to tr/ it a little
AW.20 Can you do that?
AW.21 I want to take a bath
AW.22 He want yet (now) with me sleep
AW.23 He want to put trousers on
AW.24 I want to go mit (with) Mommy

July

AW.25 Peter has pushed me away
AW.26 I can't read it
AW.27 Shall I drive to him?
AW.28 I want there drive 'I want to drive over there'
AW.29 I cannot better park 'I can't park any better'
AW.30 He can quickly fall